

(2) Have CMS coverage for all transportation systems serving NPS facilities that meet minimum CMS needs criteria, as appropriate, funded through the FLHP.

(b) The NPS shall consider the results of the CMS when selecting congestion mitigation strategies that are the most time efficient and cost effective and that add value (protection/rejuvenation of resources, improved visitor experience) to the park and adjacent communities.

(c) In addition to the requirements provided in § 970.204, the CMS must meet the following requirements:

(1) For those NPS transportation systems that require a CMS, in both metropolitan and non-metropolitan areas, consideration shall be given to strategies that promote alternative transportation systems, reduce private automobile travel, and best integrate private automobile travel with other transportation modes.

(2) For portions of the NPS transportation system within transportation management areas (TMAs), the NPS transportation planning process shall include a CMS that meets the requirements of this section. By agreement between the TMA and the NPS, the TMA's CMS coverage may include the transportation systems serving NPS facilities, as appropriate. Through this agreement(s), the NPS may meet the requirements of this section.

(3) If congestion exists at a NPS facility within the boundaries of a TMA, and the TMA's CMS does not provide coverage of the portions of the NPS transportation facilities experiencing congestion, the NPS shall develop a separate CMS to cover those facilities. Approaches may include the use of alternate mode studies and implementation plans as components of the CMS.

(4) A CMS will:

- (i) Identify and document measures for congestion (e.g., level of service);
- (ii) Identify the causes of congestion;
- (iii) Include processes for evaluating the cost and effectiveness of alternative strategies;
- (iv) Identify the anticipated benefits of appropriate alternative traditional and nontraditional congestion management strategies;

(v) Determine methods to monitor and evaluate the performance of the multi-modal transportation system; and

(vi) Appropriately consider strategies, or combinations of strategies for each area, such as:

- (A) Transportation demand management measures;
- (B) Traffic operational improvements;
- (C) Public transportation improvements;
- (D) ITS technologies; and
- (E) Additional system capacity.

PART 971—FOREST SERVICE MANAGEMENT SYSTEMS

Subpart A—Definitions

Sec.

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Subpart B—Forest Highway Program Management Systems

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- 971.214 Federal lands congestion management system (CMS).

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Subpart A—Definitions

§ 971.100 Purpose.

The purpose of this subpart is to provide definitions for terms used in this part.

§ 971.102 Applicability.

The definitions in this subpart are applicable to this part, except as otherwise provided.

§ 971.104 Definitions.

Alternative transportation systems means modes of transportation other than private vehicles, including methods to improve system performance such as transportation demand management, congestion management, and intelligent transportation systems. These mechanisms help reduce the use of private vehicles and thus, improve overall efficiency of transportation systems and facilities.

Elements mean the components of a bridge that are important from a structural, user, or cost standpoint. Examples are decks, joints, bearings, girders, abutments, and piers.

Federal lands bridge management system (BMS) means a systematic process used by the Forest Service (FS), the Fish and Wildlife Service (FWS), and the National Park Service (NPS) for collecting and analyzing bridge data to make forecasts and recommendations, and that provides the means by which bridge maintenance, rehabilitation, and replacement programs and policies may be efficiently and effectively considered.

Federal lands congestion management system (CMS) means a systematic process used by the FS, FWS, and NPS for managing congestion that provides information on transportation system performance, and alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet Federal, State, and local needs.

Federal Lands Highway Program (FLHP) means a federally funded program established in 23 U.S.C. 204 to address transportation needs of Federal and Indian lands.

Federal lands pavement management system (PMS) means a systematic process used by the FS, FWS, and NPS that provides information for use in implementing cost-effective pavement reconstruction, rehabilitation, and preventive maintenance programs and policies, and that results in pavement designed to accommodate current and forecasted traffic in a safe, durable, and cost-effective manner.

Federal lands safety management system (SMS) means a systematic process used by the FS, FWS, and NPS with the goal of reducing the number and se-

verity of traffic accidents by ensuring that all opportunities to improve roadway safety are identified, considered, implemented, and evaluated as appropriate, during all phases of highway planning, design, construction, operation and maintenance, by providing information for selecting and implementing effective highway safety strategies and projects.

Forest highway (FH) means a forest road under the jurisdiction of, and maintained by, a public authority and open to public travel.

Forest Highway Program means the public lands highway funds allocated each fiscal year, as is provided in 23 U.S.C. 202, for projects that provide access to and within the National Forest system, as described in 23 U.S.C. 202(b) and 23 U.S.C. 204.

Forest Highway Program transportation improvement program (FHTIP) means a staged, multiyear, multimodal program of transportation projects in a State area consistent with the FH transportation plan and developed through the tri-party FH planning processes pursuant to 23 U.S.C. 204, and 23 CFR 660 subpart A.

Forest Service transportation plan means the official FH multimodal, transportation plan that is developed through the tri-party FH transportation planning process pursuant to 23 U.S.C. 204.

Highway safety means the reduction of traffic accidents on public roads, including reductions in deaths, injuries, and property damage.

Intelligent transportation system (ITS) means electronics, communications, or information processing, used singly or in combination, to improve the efficiency and safety of a surface transportation system.

Life-cycle cost analysis means an evaluation of costs incurred over the life of a project allowing a comparative analysis between or among various alternatives. Life-cycle cost analysis promotes consideration of total cost, including maintenance and operation expenditures. Comprehensive life-cycle cost analysis includes all economic variables essential to the evaluation including user costs such as delay, safety costs associated with maintenance and rehabilitation projects,

agency capital costs, and life-cycle maintenance costs.

Metropolitan planning area means the geographic area in which the metropolitan transportation planning process, required by 23 U.S.C. 134 and 49 U.S.C. 5303-5306, must be carried out.

Metropolitan planning organization (MPO) means the forum for cooperative transportation decision-making for the metropolitan planning area pursuant to 23 U.S.C. 134 and 49 U.S.C. 5303.

National Forest System means all the lands and waters reported by the FS as being part of the National Forest System, including those generally known as National Forests and National Grasslands.

Operations means those activities associated with managing, controlling, and regulating highway traffic.

Secretary means the Secretary of Transportation.

Serviceability means the degree to which a bridge provides satisfactory service from the point of view of its users.

State means any one of the 50 States, the District of Columbia, or Puerto Rico.

Transportation facilities mean roads, streets, bridges, parking areas, transit vehicles, and other related transportation infrastructure.

Transportation Management Area (TMA) means an urbanized area with a population over 200,000 (as determined by the latest decennial census) or other area when TMA designation is requested by the Governor and the MPO (or affected local officials). It also must be officially designated by the Administrators of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). The TMA designation applies to the entire metropolitan planning area(s).

Tri-party means the joint, cooperative, shared partnership among the Federal Lands Highway Division (FLHD), State Department of Transportation (State DOT), and the FS to carry out the FH program.

Subpart B—Forest Highway Program Management Systems

§ 971.200 Purpose.

The purpose of this subpart is to implement 23 U.S.C. 204, which requires the Secretary and the Secretary of each appropriate Federal land management agency, to the extent appropriate, to develop by rule safety, bridge, pavement, and congestion management systems for roads funded under the FLHP.

§ 971.202 Applicability.

The provisions in this subpart are applicable to the FS, the Federal Highway Administration, and the State DOTs that are responsible for satisfying these requirements for management systems pursuant to 23 U.S.C. 204.

§ 971.204 Management systems requirements.

(a) The tri-party partnership shall develop, establish, and implement the management systems as described in this subpart. If the State has established a management system for FH that fulfills the requirements in 23 U.S.C. 303, that management system, to the extent applicable, can be used to meet the requirements of this subpart consistent with 23 CFR 660.105(b). The management systems may be tailored to meet the FH program goals, policies, and needs using professional engineering and planning judgment to determine the nature and extent of systems coverage consistent with the intent and requirements of this rule.

(b) The tri-party partnership shall develop and implement procedures for the acceptance of the existing, or the development, establishment, implementation, and operation of new management systems. The procedures shall include:

(1) A process for ensuring the output of the management systems is considered in the development of the FH program transportation plans and transportation improvement programs, and in making project selection decisions under 23 U.S.C. 204;

(2) A process for the analyses and coordination of all management systems outputs to systematically operate,

maintain, and upgrade existing transportation assets cost-effectively;

(3) A description of each management system;

(4) A process to operate and maintain the management systems and their associated databases; and

(5) A process for data collection, processing, analysis, and updating for each management system.

(c) All management systems will use databases with a common or coordinated reference system, that can be used to geolocate all database information, to ensure that data across management systems are comparable.

(d) Existing data sources may be used by the tri-party partnership to meet the management system requirements.

(e) The tri-party partnership shall develop an appropriate means to evaluate the effectiveness of the management systems in enhancing transportation investment decision-making and improving the overall efficiency of the affected transportation systems and facilities. This evaluation is to be conducted periodically, preferably as part of the FS planning process.

(f) The management systems shall be operated so investment decisions based on management system outputs can be accomplished at the State level.

§ 971.206 Funds for establishment, development, and implementation of the systems.

The FH program funds may be used for development, establishment, and implementation of the management systems. These funds are to be administered in accordance with the procedures and requirements applicable to the funds.

§ 971.208 Federal lands pavement management system (PMS).

In addition to the requirements provided in § 971.204, the PMS must meet the following requirements:

(a) The tri-party partnership shall have PMS coverage of all FHs and other associated facilities, as appropriate, funded under the FLHP.

(b) The PMS may be based on the concepts described in the AASHTO's "Pavement Management Guide."¹

(c) The PMS may be utilized at various levels of technical complexity depending on the nature of the transportation network. These different levels may depend on mileage, functional classes, volumes, loading, usage, surface type, or other criteria the tri-party partnership deems appropriate.

(d) The PMS shall be designed to fit the FH program goals, policies, criteria, and needs using the following components, at a minimum, as a basic framework for a PMS:

(1) A database and an ongoing program for the collection and maintenance of the inventory, inspection, cost, and supplemental data needed to support the PMS. The minimum PMS database shall include:

(i) An inventory of the physical pavement features including the number of lanes, length, width, surface type, functional classification, and shoulder information;

(ii) A history of project dates and types of construction, reconstruction, rehabilitation, and preventive maintenance. If some of the inventory or historic data is difficult to establish, it may be collected when preservation or reconstruction work is performed;

(iii) A condition survey that includes ride, distress, rutting, and surface friction (as appropriate);

(iv) Traffic information including volumes and vehicle classification (as appropriate); and

(v) Data for estimating the costs of actions.

(2) A system for applying network level analytical procedures that are capable of analyzing data for all FHs and other appropriate associated facilities in the inventory or any subset. The minimum analyses shall include:

¹ "Pavement Management Guide," AASHTO, 2001, is available for inspection as prescribed at 49 CFR part 7. It is also available from the American Association of State Highway and Transportation Officials (AASHTO), Publication Order Dept., P.O. Box 96716, Washington, DC 20090-6716 or online at <http://www.transportation.org/publications/bookstore.nsf>.

(i) A pavement condition analysis that includes ride, distress, rutting, and surface friction (as appropriate);

(ii) A pavement performance analysis that includes present and predicted performance and an estimate of the remaining service life. Performance and remaining service life may be developed with time; and

(iii) An investment analysis that:

(A) Identifies alternative strategies to improve pavement conditions;

(B) Estimates costs of any pavement improvement strategy;

(C) Determines maintenance, repair, and rehabilitation strategies for pavements using life cycle cost analysis or a comparable procedure;

(D) Provides for short and long term budget forecasting; and

(E) Recommends optimal allocation of limited funds by developing a prioritized list of candidate projects over a predefined planning horizon (both short and long term).

(e) For any FHs and other appropriate associated facilities in the inventory or subset thereof, PMS reporting requirements shall include, but are not limited to, percentage of roads in good, fair, and poor condition.

§971.210 Federal lands bridge management system (BMS).

In addition to the requirements provided in §971.204, the BMS must meet the following requirements:

(a) The tri-party partnership shall have a BMS for the FH bridges funded under the FLHP and required to be inventoried and inspected under 23 CFR 650, subpart C, National Bridge Inspection Standards (NBIS).

(b) The BMS may be based on the concepts described in the AASHTO's "Guidelines for Bridge Management Systems."²

(c) The BMS shall be designed to fit the FH program goals, policies, criteria, and needs using the following

components, as a minimum, as a basic framework for a BMS:

(1) A database and an ongoing program for the collection and maintenance of the inventory, inspection, cost, and supplemental data needed to support the BMS. The minimum BMS database shall include:

(i) The inventory data required by the NBIS (23 CFR 650, subpart C);

(ii) Data characterizing the severity and extent of deterioration of bridge elements;

(iii) Data for estimating the cost of improvement actions;

(iv) Traffic information including volumes and vehicle classification (as appropriate); and

(v) A history of conditions and actions taken on each bridge, excluding minor or incidental maintenance.

(2) A system for applying network level analytical procedures at the State or local area level, as appropriate, and capable of analyzing data for all bridges in the inventory or any subset. The minimum analyses shall include:

(i) A prediction of performance and estimate of the remaining service life of structural and other key elements of each bridge, both with and without intervening actions; and

(ii) A recommendation for optimal allocation of limited funds through development of a prioritized list of candidate projects over predefined short and long-term planning horizons.

(d) The BMS may include the capability to perform an investment analysis, as appropriate, considering size of structure, traffic volume, and structural condition. The investment analysis may:

(1) Identify alternative strategies to improve bridge condition, safety, and serviceability;

(2) Estimate the costs of any strategies ranging from maintenance of individual elements to full bridge replacement;

(3) Determine maintenance, repair, and rehabilitation strategies for bridge elements using life cycle cost analysis or a comparable procedure; and

(4) Provide short and long-term budget forecasting.

²"Guidelines for Bridge Management Systems," AASHTO, 1993, is available for inspection as prescribed at 49 CFR part 7. It is also available from the American Association of State Highway and Transportation Officials (AASHTO), Publication Order Dept., P.O. Box 96716, Washington, DC 20090-6716 or online at <http://www.transportation.org/publications/bookstore.nsf>.

(e) For any bridge in the inventory or subset thereof, BMS reporting requirements shall include, but are not limited to, percentage of non-deficient bridges.

§971.212 Federal lands safety management system (SMS).

In addition to the requirements provided in §971.204, the SMS must meet the following requirements:

(a) The tri-party partnership shall have an SMS for transportation systems providing access to and within National Forests and Grasslands, and funded under the FLHP.

(b) The SMS may be based on the guidance in “Safety Management Systems: Good Practices for Development and Implementation.”³

(c) The tri-party partnership shall utilize SMS to ensure that safety is considered and implemented, as appropriate, in all phases of transportation system planning, design, construction, maintenance, and operations.

(d) The SMS may be utilized at various levels of complexity depending on the nature of the facility and/or network involved.

(e) The SMS shall be designed to fit the FH program goals, policies, criteria, and needs and shall contain the following components:

(1) An ongoing program for the collection, maintenance, and reporting of a database that includes:

(i) Accident records with detail for analysis such as accident type using standard reporting descriptions (e.g., right-angle, rear-end, head-on, pedestrian-related, etc.), location, description of event, severity, weather, and cause;

(ii) An inventory of safety appurtenances such as signs, delineators, and guardrails (including terminals);

(iii) Traffic information including volume and vehicle classification (as appropriate); and

(iv) Accident rates by customary criteria such as location, roadway classification, and vehicle miles of travel.

(2) Development, establishment, and implementation of procedures for:

(i) Where appropriate, routine maintenance and upgrading of safety appurtenances including highway rail crossing safety devices, signs, highway elements, and operational features,

(ii) Identifying, investigating, and analyzing hazardous or potentially hazardous transportation system safety problems, roadway locations, and features;

(iii) Establishing countermeasures and setting priorities to correct the identified hazards and potential hazards.

(3) Identification of focal points for all contacts at State, regional, tribal, and local levels to coordinate, develop, establish, and implement the SMS among the agencies.

(f) While the SMS applies to appropriate transportation systems providing access to and within National Forests and Grasslands funded under the FLHP, the extent of system requirements (e.g., data collection, analyses, and standards) for low volume roads may be tailored to be consistent with the functional classification of the roads. However, adequate requirements should be included for each roadway to provide for effective inclusion of safety decisions in the administration of the FH program.

§971.214 Federal lands congestion management system (CMS).

(a) For purposes of this section, congestion means the level at which transportation system performance is no longer acceptable due to traffic interference. For portions of the FH network outside the boundaries of TMAs, the tri-party partnership shall:

(1) Develop criteria to determine when a CMS is to be implemented for a specific FH; and

(2) Have CMS coverage for the transportation systems providing access to and within National Forests, as appropriate, that meet minimum CMS criteria.

(b) The tri-party partnership shall consider the results of the CMS when

³“Safety Management Systems: Good Practices for Development and Implementation,” FHWA and NHTSA, May 1996, may be obtained at the FHWA, Office of Safety, Room 3407, 400 Seventh St., SW., Washington, DC 20590, or electronically at <http://safety.fhwa.dot.gov/media/documents.htm>. It is available for inspection and copying as prescribed at 49 CFR part 7.

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selecting the implementation of strategies that provide the most efficient and effective use of existing and future transportation facilities.

(c) In addition to the requirements provided in § 971.204, the CMS must meet the following requirements:

(1) For those FH transportation systems that require a CMS, in both metropolitan and non-metropolitan areas, consideration shall be given to strategies that reduce private automobile travel and improve existing transportation efficiency. Approaches may include the use of alternative mode studies and implementation plans as components of the CMS.

(2) A CMS will:

(i) Identify and document measures for congestion (e.g., level of service);
(ii) Identify the causes of congestion;
(iii) Include processes for evaluating the cost and effectiveness of alternative strategies to manage congestion;

(iv) Identify the anticipated benefits of appropriate alternative traditional and nontraditional congestion management strategies;

(v) Determine methods to monitor and evaluate the performance of the multi-modal transportation system; and

(vi) Appropriately consider the following example categories of strategies, or combinations of strategies for each area:

(A) Transportation demand management measures;

(B) Traffic operational improvements;

(C) Public transportation improvements;

(D) ITS technologies; and

(E) Additional system capacity.

PART 972—FISH AND WILDLIFE SERVICE MANAGEMENT SYSTEMS

Subpart A—Definitions

Sec.

972.100 Purpose.

972.102 Applicability.

972.104 Definitions.

Subpart B—Fish and Wildlife Service Management Systems

972.200 Purpose.

972.202 Applicability.

972.204 Management systems requirements.

972.206 Funds for establishment, development, and implementation of the systems.

972.208 Federal lands pavement management system (PMS).

972.210 Federal lands bridge management system (BMS).

972.212 Federal lands safety management system (SMS).

972.214 Federal lands congestion management system (CMS).

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Subpart A—Definitions

§ 972.100 Purpose.

The purpose of this subpart is to provide definitions for terms used in this part.

§ 972.102 Applicability.

The definitions in this subpart are applicable to this part, except as otherwise provided.

§ 972.104 Definitions.

Alternative transportation systems means modes of transportation other than private vehicles, including methods to improve system performance such as transportation demand management, congestion management, and intelligent transportation systems. These mechanisms help reduce the use of private vehicles and thus improve overall efficiency of transportation systems and facilities.

Elements mean the components of a bridge important from a structural, user, or cost standpoint. Examples are decks, joints, bearings, girders, abutments, and piers.

Federal lands bridge management system (BMS) means a systematic process used by the Forest Service (FS), the Fish and Wildlife Service (FWS) and the National Park Service (NPS) for analyzing bridge data to make forecasts and recommendations, and provides the means by which bridge maintenance, rehabilitation, and replacement programs and policies may be effectively considered.

Federal lands congestion management system (CMS) means a systematic process used by the FS, FWS and NPS for